

58

Notice of Allowability	Application No.	Applicant(s)	
	10/671,730	CHANG ET AL.	
	Examiner	Art Unit	
	Curtis B. Odom	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt filed on 3/29/2007.
2. ☒ The allowed claim(s) is/are 1, 3, 6-12, 15-22, 24-28 and 33-39, 41, and 42.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|--|

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen T. Boughner on 4/12/2007.

The application has been amended as follows:

Claim 6 (currently amended). The channel equalizer as claimed in claim 1, wherein an estimation signal output in a state of decoding depth n of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number and $n \leq N$, and with N and K being natural numbers.

Claim 8 (currently amended). The channel equalizer as claimed in claim 7, wherein an estimation signal output in a state of decoding depth n of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number, with $n \leq N$, and with the plural estimation signals output in the plural states being output to corresponding filter taps of the first FB unit, respectively, with N and K being natural numbers.

Claim 15 (currently amended). The channel equalization method as claimed in claim 10, wherein, in the feedback, an estimation signal output in a state of decoding depth n ($n \leq N$) of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number, with $n \leq N$, and with N and K being natural numbers.

Claim 17 (currently amended). The channel equalization method as claimed in claim 16, wherein, in the feedback, an estimation signal output in a state of decoding depth n ($n \leq N$) of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number, with $n \leq N$, and with the plural estimation signals output in the plural states being output to corresponding filter taps of the first FB unit, respectively, with N and K being natural numbers.

Claim 30 (currently amended). The receiver as claimed in claim 28, wherein, in the channel equalizer, the Trellis decoder has an entire decoding depth of N and an entire traceback delay symbol length of $N \times K$, with N and K being natural numbers.

Claim 33 (currently amended). The receiver as claimed in claim 28, wherein, in the channel equalizer, an estimation signal output in a state of decoding depth n of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number and $n \leq N$, and with N and K being natural numbers.

Art Unit: 2611

Claim 35 (currently amended). The channel equalizer as claimed in claim 34, wherein, in the channel equalizer, an estimation signal output in a state of decoding depth n of the Trellis decoder is output to a $\{1 + (n \times K)\}^{th}$ filter tap of the first FB unit, with n being a natural number, with $n \leq N$, and with the plural estimation signals output in the plural states being output to corresponding filter taps of the first FB unit, respectively, with N and K being natural numbers.

Cancel claim 40.

EXAMINER'S STATEMENTS OF REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: Claims 1, 3, 6-12, 15-22, 24-28 and 33-39, 41, and 42 allowable over prior art references because related references do not disclose controlling a Trellis decoder by providing an estimation signal in the form of a decoding depth from the Trellis decoder to the feedback filter of the equalizer when an equalization error of a channel equalizer is less than or equal to a threshold value.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

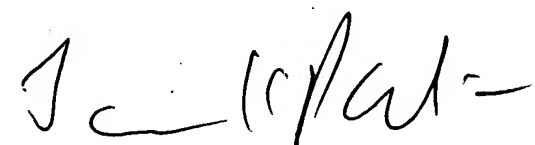
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Curtis Odom
April 12, 2007


JAY K. PATEL
SUPERVISORY PATENT EXAMINER